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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,487	11/13/2003	Martin R. Kestle	213201.00187	7590

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EXAMINER
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KERNS, KEVIN P

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/706,487

Applicant(s)

KESTLE ET AL.

Examiner

Kevin P. Kerns

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003 and 27 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/13/03 & 8/2/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Reissue Applications***

1. The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

The applicants have not specifically identified at least one error which is relied upon to support the reissue application. In item 4. on page 2 of the reissue declaration, the applicants only state that "The error in the issued patent is a potential ambiguity in Claim 5." However, this statement is not specific enough to provide proper identification of the alleged error in claim 5.

The second preliminary amendment of September 27, 2004 (including additional new claims 16-25) lacks a reissue oath/declaration. However, the reissue declaration (covering claims 1-15) of the first preliminary amendment dated November 13, 2003 is proper.

2. Claims 16-25 are rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

3. Claims 16-25 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material which is not supported by the prior patent is as follows: all instances of the limitation "angled", in

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terms of surfaces that include sprue bushing surfaces and nozzle tip surfaces (independent claims 16 and 21); and "angled at substantially ninety degrees" (claims 19, 20, 24, and 25).

4. Claims 14-25 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001); *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

With regard to claims 14-16 and 21, the applicants have broadened these independent claims to recite the prior limitation "limited amount of metallic material" (set forth in the reasons for allowance in reissue parent application 09/697,101 -- now US 6,357,511) to currently recite "metallic material". The term "metallic material" is deemed to be broader than the "limited amount of metallic material" of 09/697,101 (US

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6,357,511), as a "limited" amount of metallic material will at least partially fill a gap to form a seal. On the other hand, the term "metallic material" (in an "unlimited" manner) would not only include at least forming a seal and at least partially filling the gap, but this limitation would also more broadly encompass totally filling the gap and/or overflowing the gap. Furthermore, original claims 1, 7, and 10 of 09/697,101 were amended to include the limitation "limited amount of metallic material" set forth in the reasons for allowance.

### ***Drawings***

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "mold" (claims 1 and 15) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

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renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perrella (US 4,609,032).

Perrella discloses a nozzle assembly for a die casting machine for injection molding of a molten metallic material, in which the nozzle assembly and die casting machine include an injection nozzle joined to an injection barrel; a stationary platen holding a portion of a mold; a sprue bushing mounted in the mold, with the injection nozzle engaging the sprue bushing during the metallic material injection process; a spigot portion formed on the nozzle and the sprue bushing and defining an injection channel of generally cylindrical shape, with the engaging portion of the nozzle and sprue bushing being free to move axially and having complementary angled surfaces defining a gap of about 1/32 inch in the seat portion (abstract; column 1, lines 5-9, 43-51, and 65-68; column 2, lines 1-46; and Figures 1-7). One of ordinary skill in the art would have recognized that, during the injection process, the gap of about 1/32 inch would become filled with injected molten metal material to form a seal in the seat portion, as the molten metal flows through the channel in the vicinity of the interfacing surface of the nozzle and sprue bushing. As a result, excess molten metal in the channel (which would normally be completely filled during an injection operation) would readily flow under pressure into the gap of about 1/32 inch and be able to solidify at temperatures below the melting point of the molten metal. Upon forming a solidified metal seal at the interface of the nozzle and sprue bushing, a surface would be created at the sealing interface that would be roughly 90 degrees (perpendicular) to the flow of metal, resulting in a relatively perpendicular interface between the nozzle and sprue

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bushing. In addition, after the injection operation (upon cooling), the sprue removal process would include removal of a sprue having a coating/residue of remaining solidified molten material, as one of ordinary skill in the foundry art would recognize. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the operation of the nozzle assembly for a die casting machine for injection molding of a metallic material, as disclosed by Perrella, by forming a seal within the approximately 1/32 inch gap via control of one or more parameters that include temperature, thicknesses and/or heat conductivities of the nozzle and sprue bushing structures, surface interface contact distances etc., in order to prevent leakage of molten metal material from the injection molding system.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin P. Kerns *Kevin Kerns 4/1/05*  
Primary Examiner  
Art Unit 1725

*KPK*

kpk

April 1, 2005